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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Surya Varanasi

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7590

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20333 SH 249

SUITE 600

HOUSTON, TX 77070

EXAMINER

FAROUL, FARAH

ART UNIT

PAPER NUMBER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/698,851	Applicant(s) VARANASI ET AL.	
	Examiner FARAH FAROUL	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 17-34, 36-53, 55-72 and 74-95 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15, 17-34, 36-53, 55-72 and 74-95 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/09/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The following Office Action is based on the amendment filed on January 2, 2008, having claims 1-15, 17-34, 36-53, 55-72, and 74-95 and figures 1-5.

Response to Arguments

2. Applicant's arguments filed January 2, 2008 have been fully considered but they are not persuasive. The 112 and Double Patenting rejections have been withdrawn. Applicant's arguments in regards to the cited Valdevit reference have been considered but are not persuasive. Applicant has argued that switch 812 of figure 8A depicts only one exit trunk group. The examiner respectfully disagrees. Figure 8A depicts three exit trunk groups 824(1), 824(2) and 824(3) and thus, satisfies the claim requirements. The 102 rejection is thus maintained.

Claim Objections

3. Claims 1, 8, 12, 21, 25, 27, 31, 40, 46, 50, 59, 65, 69, 78-95 are objected to because of the following informalities:

Claims 1, 8, 12, 21, 27, 31, 40, 46, 50, 59, 65, 69, 78, 84, 86, 92 and 95 recite the limitation "so as". Deletion of the word "so as" is required to render the claims positive.

Claims 21, 40, 59 recite the term "capability". The term is to be deleted to render the claims positive.

Claim 25 recites the limitation "first said switch" in line 1. The limitation is to be replaced by "said first switch".

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Appropriate correction is required.

Drawings

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 322. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In addition to Replacement Sheets containing the corrected drawing figure(s), applicant is required to submit a marked-up copy of each Replacement Sheet including annotations indicating the changes made to the previous version. The marked-up copy must be clearly labeled as "Annotated Sheets" and must be presented in the amendment or remarks section that explains the change(s) to the drawings. See 37 CFR 1.121(d)(1). Failure to timely submit the proposed drawing and marked-up copy will result in the abandonment of the application.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 78-95 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Applicant has recited “an article” in claims 78-95. The limitation “article” is directed to non-statutory subject matter. The preamble of the claims should recite “an article of manufacture”.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-15, 17-34, 36-53, 55-72, and 74-95 are rejected under 35 U.S.C. 102(b) as being anticipated by Valdevit et al. (US 2002/0156918 A1).

For claims 1, 21, 40, 59, 78, and 92, Valdevit discloses a host (figure 2, source or destination), a physical storage unit (figure 2, element 136)

A first switch (fig 2, 210-3,2) and a second switch (fig 2, 210-3,4) communicatively coupled to form a switch fabric (fig 2, 230 and 240) and the first and the second switch further communicatively coupled to the host and physical storage unit (see connections in figure 2)

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At least the first switch (fig 4) including a processor (424 or 428) and memory (444) to balance the a flow of frames exiting the switch

The first switch selects an exit port of the switch from a set of possible exit ports through which a frame from the flow of frames will exit to reduce frame traffic congestion along potential routes that include the set of possible exit ports including at least some of the exit ports (paragraph 63 and Fig 6, blocks 602, 604-608 and 610) of at least two trunk groups (Fig 8A depicts trunk groups 824(1), 824(2) and 824 (3) within switch 812)

For claim 2, Valdevit discloses at least all of the exit ports of at least two trunk groups (Fig 8A, elements 812 and 818)

For claims 3-4, 22-23, 41-42, 60-61 and 79-80, Valdevit discloses at least one of the trunk groups comprises four or eight exit ports (paragraph 51 wherein the trunk groups may comprise four or more exit ports and Figure 8A, elements 812 and 818)

For claims 5, 24, 43, 62, 81 and 93, Valdevit discloses the process comprises a pseudo-random process (paragraph 64, lines 1-5).

For claims 6, 25, 44, 63, 82 and 94, Valdevit discloses applying the pseudo-random process comprises applying a hash function (paragraph 64, lines 1-5).

For claims 7, 26, 45, 64 and 83, Valdevit discloses the hash function is applied to a set of parameters with the frames exiting the switch in order to select an exit port from the set of possible exit ports (paragraph 63).

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For claims 8, 12, 27, 31, 46, 50, 65, 69, 84, 86 and 95, Valdevit discloses a weight or multiple weights is/are respectively assigned to at least some respective ones of the exit ports, employing the weights to select an exit port over alternative exit ports to achieve an function reflected by said weights (paragraphs 63 and 64).

For claims 9-10, 13-14, 28-29, 33-34, 47-48, 51-52, 66-67, 70-71, Valdevit discloses obtaining a higher or lower value objective function (paragraph 64, lines 11-29 wherein the objective function maybe a lower or upper value)

For claims 11, 15, 30, 32, 49, 53, 68, 72, 85 and 87, Valdevit discloses multiple weights at least in part reflect consumed bandwidth for particular routes (paragraph 64, lines 11-29 wherein the weights are based on particular paths).

For claim 17, 36, 55, 74, and 88, Valdevit discloses at least one of the set of possible exit ports is selected based at least in part on a source tag or destination tag added to the frame after the frame enters the switch (paragraph 63).

For claim 18, 37, 56, 75 and 89, Valdevit discloses the source tag or destination tap is stripped off the frame before the frame exits the switch (paragraph 63).

For claim 19, 38, 57, 76, and 90, Valdevit discloses at least one of the possible exit ports is selected based at least in part on a source tag and a destination tag added to each of the frames after the frames enter the switch (paragraph 63).

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For claim 20, 39, 58, 77 and 91, Valdevit discloses the source tag or destination tag is stripped off each of the frames before each of the frame exits the switch (paragraph 63).

Conclusion

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARAH FAROUL whose telephone number is (571)270-1421. The examiner can normally be reached on Monday - Friday 6:30 AM - 4 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax

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phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Farah Faroul/
Examiner, Art Unit 2616

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2616